

Pathway to Dentist

What does a Dentist do? How's the job outlook?

Dentists diagnose and treat problems with patients' teeth, gums, and related parts of the mouth. They provide advice and instruction on taking care of the teeth and gums and on diet choices that affect oral health.

Overall employment of dentists is projected to grow 8 percent from 2020 to 2030. Much of the projected employment growth in this occupation is due to recovery from the COVID-19 recession that began in 2020. Demand for dentists is expected to increase as larger numbers of older people require dental services. Because each generation is more likely to keep their teeth than the previous generation, more dental care will be needed in the years to come. Dentists and dental specialists are among the highest paid professions; they're also among some of the more stable professions. The annual mean wage for dentists in the Denver Metro area is approximately \$206,340.*



*U.S. Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Dentists, General, on the Internet at <https://www.bls.gov/ooh/healthcare/dentists.htm>

How do I become a Dentist?

Most dental school applicants have a bachelor's degree; however, it is still possible to apply without one. It should also be noted that you don't need to be a Biology major in order to apply for dental school. If you have at least 90 credits and have completed the prerequisite courses for the specific program to which you are applying, you can pursue dental school. Applicants will also need to take the Dental Admission Test (DAT). An applicant's DAT score, GPA, dental shadowing hours, interviews and recommendations will all be considered when applying for dental school.

Dentists must also be licensed in the state in which they work. Licensure requirements vary by state, although candidates must have a Doctor of Dental Surgery (DDS) or Doctor of Medicine in Dentistry/Doctor of Dental Medicine (DMD) degree from an accredited dental program and pass written and clinical exams. Dentists who practice in a specialty area must complete postdoctoral training.

Course prerequisites required for those interested in pursuing dental school include:

General Chemistry with lab – CHE 1800/1801 and CHE 1810/1811; 2 semesters

Organic Chemistry with lab – CHE 3100/3120 and CHE 3110/3130; 2 semesters

Biochemistry I – CHE 4310, no lab required; 1 semester

General Biology with lab – BIO 1080/1090 and BIO 1081/1091; 2 semesters

General Microbiology – BIO 2400; 1 semester

College Physics with lab – PHY 2010/2030 and PHY 2020/2040; 2 semesters

Math – MTH 1110 and MTH 1120 (prerequisites for CHE & PHY); 2 semesters

English Composition – ENG 1010; 1 semester

Biology Faculty Advisor who can guide you for this path is:

Dr. Clare Hays

email: haysc@msudenver.edu

REQUIREMENTS FOR A MAJOR IN BIOLOGY
for 2020-2021 or future catalogs ONLY

A grade of “C-” or better is required for each BIO prefix course to count towards the major

Required Biology Courses for both the B.A. or the B.S. Degree

BIO 1080-3 General Biology I	3
BIO 1090-1 General Biology Lab I.....	1
BIO 1081-3 General Biology II	3
BIO 1091-1 General Biology Lab II.....	1
BIO 3520-3 General Ecology	3

Take ONE of these Genetics options:

- BIO 3600-4** General Genetics (no lab).....4
OR
 BIO 3610-4 Genetics: Principles & Analysis (has lab)4

Pick ONE of these options:

- Option 1:** BIO 2100-5 General Botany
OR
 Option 2: BIO 2400-5 General Microbiology
OR
 Option 3: Both BIO 2310-4 and BIO 2320-4 (Anatomy & Physiology I & II) (You must take both semesters to get credit for this option)
OR
 Option 4: Either BIO 3200-4 Invertebrate Zoology or BIO 3260-4 Vertebrate Zoology (If you wish to take both zoology courses, the other will count as an upper division elective)

Students are required to take a Senior Experience course:

Fulfills Senior Experience Requirement	
<input type="checkbox"/> BIO 4050-3 Advanced Cell & Molecular Biology	<input type="checkbox"/> BIO 4510-4 Microbial Ecology
<input type="checkbox"/> BIO 4230-3 Issues in Conservation Biology	<input type="checkbox"/> BIO 4540-4 Plant Ecology
<input type="checkbox"/> BIO 4300-3 Neurobiology	<input type="checkbox"/> BIO 4550-4 Animal Ecology
<input type="checkbox"/> BIO 4820-4 Developmental Biology	
<input type="checkbox"/> BIO 4850-3 Evolution	

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Elective Biology courses: Biology courses from 2000, 3000, and 4000 must be completed to bring the total of biology courses approved for the major to 40 credits. *At least 21 of these Biology credits must be from the 3000 or 4000 courses of the Department of Biology.*

Recommended Elective Courses To Choose From (Specific to Dentistry):

- BIO 2310 – Anatomy & Physiology Credits: 4
- BIO 2320 – Anatomy & Physiology II Credits: 4
- BIO 3050 - Cell Biology Credits: 4
- BIO 3320 – Advanced Human Physiology Credits: 4
- BIO 3210 - Histology Credits: 4
- BIO 3350 - Immunology Credits: 3
- BIO 3351 – Immunology Lab Credits: 1

Total Credit Hours in Biology (minimum of 40) _____

Upper Division Biology Credit Hours (minimum of 21) _____

B.S. Non-Bio Course Requirements:

CHE 1800-4 Gen Chemistry I _____

CHE 1801-1 Gen Chemistry I Lab _____

CHE 1810-4 Gen Chemistry II _____

CHE 1811-1 Gen Chemistry II Lab _____

CHOOSE YOUR PATH:

CHE 3100-4 Organic Chemistry I _____

CHE 3120-1 Organic Chemistry I Lab _____

AND

CHE 3110- 3 Organic Chemistry II _____

~OR~

ºCHE 3090- 4 Survey of Organic Chem _____

CHE 3120-1 Organic Chemistry I Lab _____

AND

ºCHE 4310-4 Biochemistry _____

º **Note on CHE 3090 – Survey of Organic Chemistry** - this class is no longer being offered

º **Note on CHE 4310 – Biochemistry** – requires completion of both Organic Chemistry I and II

B.A. Non-Bio Courses Requirements:

*CHE 1100-4 Principles of Chem _____

CHE 2100-4 Intro to Org/Biochem _____

~OR~

CHE 1800-4 Gen Chemistry I _____

*CHE 1801-1 Gen Chemistry I Lab _____

CHE 1810-4 Gen Chemistry II _____

CHE 1811-1 Gen Chemistry II Lab _____

*To use CHE 1100 or 1800 for the Natural and Physical Sciences requirement, students must take the corresponding lab (CHE 1150 or CHE 1801, respectively).

Math Requirement:

Two Semesters of Math: _____

One Semester of Math: _____

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Choose from the following math courses:

MTH 1108-1109 (Stretch College Algebra)*, MTH 1110 (College Algebra), MTH 1111 and MTH 1101 (College Algebra with lab), MTH 1112 (College Algebra through Modeling), MTH 1115/1116 (College Algebra through Modeling with Lab), MTH 1120 (Trigonometry), MTH 1210 (Intro to Statistics), MTH 1410 (Calculus I)**

MTH 1108-1109 is a Stretch Course and only counts as ONE of the required math courses for the BIO BS.

Students planning to take Calculus must take MTH 1108-1109, MTH 1110, or MTH 1111

Physics Requirement (Specific to Dentistry):

PHY 2010/2030 – College Physics I and College Physics I Lab
AND
PHY 2020/2040 – College Physics II and College Physics II Lab

General Studies Requirements (33 cr. total), please visit
<http://www.msudenver.edu/advising/facultystaff/generalstudiesrequirements/>

Total Credits (Minimum 120) _____

Total Upper Division Credits (Minimum 40 TOTAL) _____

What is your Minor? (required) _____